FY 2008 S & PF COMPETITIVE GRANT PROPOSAL

Applicant
Kentucky Division of Forestry
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Project Name: Cross-walk and Develop GIS Mapping Applications and Accomplishment Monitoring Geospatial Database

Project Leaders:
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Abstract:
Over three years ago, the Kentucky Division of Forestry developed the original M-5 mapping template (extension) used for Arc View 3.2. The software developer, ERSI, no longer provides technical support for Arc View 3.2 and the Kentucky Environmental Public Protection Cabinet (EPPC) has purchased Arc GIS 9.2. The EPPC will no longer support Arc View 3.2 on the GIS portal. Many states in the Southern region need assistance now to meet the new GIS federal grant requirements and accomplishment reporting guidelines and the mapping extension can be used to assist each state with developing the state assessment and response plans. The Kentucky Division of Forestry seeks competitive grant funding to cross-walk this mapping application to ArcGIS 9.2 and make it available to all Southern states. Several states are currently using or will be purchasing the ArcGIS 9.2 software. In addition, the project will develop a geospatial database that captures activities such as forest stewardship and statewide forest management activities (i.e. forest health, urban, wildland urban interface, wildland fire protection, watershed management, water quality and air quality) as well as integrate USDA federal cost-share program accomplishments and improve the delivery of the USDA Forest Service-State and Private Forestry Program across the South.

Partnering Agencies:
USDA Forest Service (Region 8), Kentucky Division of Forestry, Environmental Public Protection Cabinet-Office Administrative and Information Services and Kentucky Commonwealth Office of Technology.

Project Location:
Statewide, with potential multi-state application

Expected Completion Quarter: 4th Quarter 2009

Total Federal Funding Request: $160,000.00

Total Proposal Budget:
Federal Funds
Travel	$ 5,000.00
Training for KDF GIS & Program Specialists	$ 15,000.00
University of Kentucky - Application Cross-walk coding	$15,000.00
GIS / Geodatabase Development	$ 45,000.00
External Funds/In-Kind Match	
Personnel Time	$ 70,000.00
KDF Development	$ 10,000.00

Project Description:

As more Southern forestlands become fractured and long-term forest sustainability lost forever due to underlying causes such as development and smaller parcel ownerships. The Southern states need a method to identify, conserve, protect and enhance critically important forestland in the South.

The Southern Forest Land Assessment (SFLA) was a project sanctioned through the Southern Group of State Foresters and the USDA Forest Service (Region 8). This project focused primarily on the development of a 12-layer GIS model that generates a priority index for forest stewardship. States will receive the geospatial data, which will allow them to develop and write a statewide assessment and response plan. These plans will identify and prioritize landscape-scale issues and projects and will allow the states to focus technical assistance within the critically important forestlands.

Many states in the Southern region need assistance to meet the new GIS federal grant requirements and Forest Service accomplishment reporting guidelines. Some states will struggle with the new requirements due to the lack of GIS staff, technological impediments and agency funding.

Over three years ago, the Kentucky Division of Forestry developed the M-5 Tools, an extension that is used in with Arc View 3.2 software. The Arc View 3.2 software is no longer supported by ERSI or EPPC. The mapping extension enables field foresters to create a standardized landowner map, as well as saving the GIS boundary and management units as shapefiles. The shapefiles can provide the basis to identify the critically important forestlands and the GIS analysis needed to complete the state assessment plan. The M-5 Tools was designed so that foresters could accomplish these tasks with a minimum working knowledge of ArcView. Additionally, the property maps are produced more efficiently and conform to a standardized layout. All the shapefiles along with electronic copies of the stewardship plans have been saved to a central repository creating a statewide GIS library. This software was made available to other Southern states.

The Kentucky Division of Forestry seeks funding to cross-walk this mapping application to ArcGIS 9.2. The division will contract with the University of Kentucky to re-write the code in Visual Basic. Several states in the South are currently using or will be purchasing ArcGIS, so the converted application will have utility in most, if not all, of the Southern region. Additional features will be required in the application so that all activities including forest stewardship plans, forest management plans, on the ground landowner accomplishments and USDA federal cost-share activities may be stored into a spatial geodatabase as required for the spatial implementation and monitoring requirements that have been developed by the Forest Service.

The division has been a forerunner in the use of GIS applications in the Southern region. The Kentucky Division of Forestry must expand the M-5 Tools application to be compatible with ArcGIS and develop a standardized geodatabase for tracking landowner accomplishments, as well as complying with Forest Service grant reporting requirements.

EVALUATION CRITERIA

National and Regional Relevance:
The Southern Forest Land Assessment will aid the Southern states with developing their statewide assessment and response plans. Each state must have the capacity, ability and knowledge of GIS technologies at their disposal to be able to conserve, protect and enhance the forest resources in their respective state and ensure the public benefits derived from them. These forest resources cover forest sustainability, fractured forests, forest fuels, wildland fire protection, urban expansion and interface, water quality, air quality, and changing markets. The integration of local, state and federal agencies communicating through GIS services will provide measurable landscape scale management strategies. The Kentucky Division of Forestry would like to expand the mapping extension application and the spatial geodatabase to assist other states across the south.

Prioritization:
Each state must identify the critically important forestlands and focus its technical assistance, grant funding and time to these areas outlined in the state assessment and response plans. An agency will have to prioritize its management strategies and outreach efforts using GIS tools. A standardized mapping application and geodatabase allows users to minimize time and prioritize landowner assistance to the critically important forestlands as well as meeting the new federal grant requirements and predicting future forest management outcomes at the landscape-scale level.

Meaningful Scale:
Standardized mapping applications and geospatial databases allow GIS technology to be used to look past city, county and state boundaries and assimilate GIS layers into landscape-scale planning and implementing regional projects.

Collaboration:
This project incorporates the partnership between the University of Kentucky, the EPPC-Office of Administrative and Information Services, Kentucky Commonwealth Office of Technology, Kentucky Division of Forestry, Forest Service (Region 8) and other Southern states that need GIS technical assistance with standardized mapping applications and the development of geospatial databases.

Outcomes:
This project will potentially assist several Southern states that have limited GIS staff, networking capabilities, various types of GIS technology and minimize the working knowledge and training needed for field staff. Each states geospatial database could communicate with one another, and GIS analysis can be done much easier on a regional and national level. Reporting accomplishments to the regional and national Forest Service offices would be standardized.

Technology:
The Southern Forest Land Assessment will provide the Southern states the avenue in order to develop state assessment and response plans. The mapping application and the development of a spatial geodatabase will allow Southern states to create statewide GIS repositories (i.e. electronic libraries) and allow states to communicate, use GIS analysis much more efficiently and develop regional projects.

Integrated Delivery:
This project seeks to integrate the data output from the Southern Forest Land Assessment, the new federal forest stewardship program requirements, tracking on the ground landowner accomplishments, USDA federal cost-share programs, and statewide forest management activities in order to improve the delivery of the USDA Forest Service-State and Private Forestry program across the Southern region.

Leverage:
The proposal is for $80,000.00 of federal competitive grant funds and the Kentucky Division of Forestry's in-kind match and contributions will be $80,000.00 for personnel time and development hours. Further detail and grant break down is explained in the total proposal budget.

Influence Positive Change:
Over three year's ago, the Kentucky Division of Forestry stopped hand drawing maps and developed the Arc View 3.2 mapping template extension. The mapping application allows the field foresters to create a standardized landowner map, and the division has archived the GIS boundaries and management units into a statewide GIS library along with the electronic repository of the forest stewardship plans. The division has experienced GIS development and growing pains with only one GIS staff member, software and hardware issues and has jumped through many hurdles and still has been the forerunner in the South. GIS technology becomes dated, and the division must cross walk the current mapping extension to ArcGIS 9.2. This project could potentially save states across the South from having to start at ground zero.

Timeliness:
This project timeline will be completed within 24 months with the approval of the grant.